



# FCC Verification Test Report



Trade Name : LCD MODULE

Model Number : LCD PANEL & LCD MODULE,TN\STN\FSTN\TFT\COB\COG

Prepared for : Shenzhen Hotdisplay Technology Co.Ltd

Address : JHZ S&T Bussiness Park Jinlong Road Baolong Industrial City  
Longgang Shenzhen P.R.C(518118)

Prepared By : Shenzhen ZCT Technology Co.,Ltd.

Address : 3F, 5th Building, Hongsheng Industrial Zone, No.4336 Bao'an  
Road, Bao'an District, Shenzhen, China.

Tel : 400-805-1899

Fax : (86) 755-23702323

Report No. : SZZCT1601260B-FCC-X2

Date of Test : Jan. 22-26, 2016

Date of Rep. : Jan. 26, 2016

Prepared by(Engineer):

*Devlin*

Reviewer(Quality Manager):

*King*

Approved & Authorized Signer(Manager):

*Jack*



**Shenzhen ZCT Technology Co., Ltd.**

3F, 5th Building, Hongsheng Industrial Zone, No.4336 Bao'an Road, Bao'an District, Shenzhen, China.  
Tel: 400-805-1899; Fax:86-755-23702323; <http://www.renzhengjian.com>



# Contents

	Page
<b>COVER PAGE</b>	
<b>CONTENTS</b> .....	<b>2</b>
<b>1 TEST SUMMARY</b> .....	<b>3</b>
<b>2 GENERAL INFORMATION</b> .....	<b>3</b>
2.1 GENERAL DESCRIPTION OF EUT.....	3
<b>3 EQUIPMENTS LIST FOR ALL TEST ITEMS</b> .....	<b>4</b>
<b>4 EMISSION TEST RESULTS</b> .....	<b>5</b>
4.1 MAINS TERMINALS DISTURBANCE VOLTAGE MEASUREMENT.....	5
4.1.1 E.U.T. OPERATION.....	5
4.1.2 TEST SPECIFICATION.....	5
4.1.3 MEASUREMENT DATA.....	5
4.2 RADIATED EMISSIONS MEASUREMENT.....	6
4.2.1 E.U.T. OPERATION.....	6
4.2.2 TEST SPECIFICATION.....	6
4.2.3 MEASUREMENT DATA.....	7
<b>5 APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS</b> .....	<b>10</b>



## 1 Test Summary

Test	Test Method	Criterion	Result
Mains Terminals Disturbance Voltage, 150kHz to 30MHz	FCC Part15B:2012 ANSI C63.4:2009 ICES-003 Issue 5 August 2012	Limits	PASS
Radiated Emissions 30MHz to 1GHz	FCC Part15B:2012 ANSI C63.4:2009 ICES-003 Issue 5 August 2012	Limits	PASS

## 2 General Information

### 2.1 General Description Of EUT

Manufacturer:	Shenzhen Hotdisplay Technology Co.Ltd
Manufacturer Address:	JHZ S&T Bussiness Park Jinlong Road Baolong Industrial City Longgang Shenzhen P.R.C(518118)
EUT Name:	LCD MODULE
Trade Name:	HOTDISPLAY
Model No:	LCD PANEL & LCD MODULE
Attached No.:	TN\STN\FSTN\TFT\COB\COG
Power Supply:	5V 50-60Hz
Test Supply:	Input: 5V 50-60Hz
Power Cord:	1.8m x 3 wire / Unshielded / Detachable
Signal Cable:	Video Line: 1.5m / shielded / Detachable Audio Line: 2.0m / unshielded / Detachable

**Shenzhen ZCT Technology Co., Ltd.**

3F, 5th Building, Hongsheng Industrial Zone, No.4336 Bao'an Road, Bao'an District, Shenzhen, China.  
Tel: 400-805-1899; Fax:86-755-23702323; <http://www.renzhengjiance.com>



### 3 Equipments List For All Test Items

No.	Equipment	Manufacturer	Model No.	S/N	Cal date
1	EMI Test Receiver	R&S	ESCI	100612	2015-7-01
2	EMI Test Receiver	R&S	ESPI	100067	2015-7-01
3	Amplifier	HP	8447D	1937A02415	2015-7-01
4	Single Power Conductor Module	FCC	FCC-LISN-5-50-1 -01-CISPR25	07118	2015-7-01
5	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-387	2015-7-01
6	Horn Antenna	SCHWARZBECK	BBHA9120A	B08000991-0021	2015-7-01
7	High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	169	2015-7-01
8	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	818	2015-7-01
9	Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	354	2015-7-01
10	Power Clamp	SCHWARZBECK	MDS-21	3898	2015-7-01
11	Single Power Conductor Module	FCC	FCC-LISN-5-50-1 -01-CISPR25	07254	2015-7-01
12	Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	D-69124	2015-7-01
13	Positioning Controller	C&C	CC-C-1F	MF7802155	2015-7-01
14	Electrostatic Discharge Simulator	TESEQ	NSG437	128	2015-7-01
15	Fast Transient Burst Generator	SCHAFFNER	MODULA6150	34587	2015-7-01
16	Fast Transient Noise Simulator	Noiseken	FNS-105AX	31438	2015-7-01
17	Capacitive Coupling Clamp	TESEQ	CDN8014	25115	2015-7-01
18	Color TV Pattern Genenerator	PHILIPS	PM5418	TM209966	N/A
19	Power Frequency Magnetic Field Gene	EVERFINE	EMS61000-8K	608085	2015-7-01
20	Triple-Loop Antenna	EVERFINE	LLA-2	607035	2015-7-01
21	10dB attenuator	SCHWARZBECK	MTAIMP-136	R65.90.0009	2015-7-01



# 4 Emission Test Results

## 4.1 Mains Terminals Disturbance Voltage Measurement

Frequency Range:	150kHz to 30MHz
Detector	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximum peak within 6dB of Average Limit

### 4.1.1 E.U.T. Operation

Operating Environment:

Temperature:	18 °C	Humidity:	59% RH	Atmospheric Pressure:	102	Kpa
--------------	-------	-----------	--------	-----------------------	-----	-----

EUT Operation:	1
----------------	---

### 4.1.2 Test Specification

EUT was placed upon a wooden test table 0.8m above the horizontal metal reference plane and 0.4m from the vertical ground plane, and it was connected to an AMN. The closest distance between the boundary of the EUT and the surface of the AMN is 0.8m, All peripherals were connected to another AMN, and placed at a distance of 10 cm from each other. A spectrum and receiver was connected to the RF output port of the AMN. Both average and quasi-peak value were detected.

Associated with the conducted emission test data in this report is a ±1.54dB measurement uncertainty.

### 4.1.3 Measurement Data

An initial pre-scan was performed on the live and neutral lines.  
 Quasi-peak or average measurements were performed at the frequency which maximum peak emissions were detected.  
 Please refer to the attached quasi-peak & average measurement data.

**N/A**

<b>4.2 Radiated Emissions Measurement</b>						
Frequency Range:	30MHz to 1GHz					
Measurement Distance:	3 m					
Detector:	Peak for pre-scan (120kHz resolution bandwidth)					
	Quasi-Peak if maximum peak within 6dB of limit					
<b>4.2.1 E.U.T. Operation</b>						
Operating Environment:						
Temperature:	16.7 °C	Humidity:	59% RH	Atmospheric Pressure:	102	Kpa
EUT Operation:	1					
<b>4.2.2 Test Specification</b>						
<p>EUT was placed upon a wooden test table which was placed on the turn table 0.8m above the horizontal metal ground plane, and operating in the mode as mentioned above. A receiving antenna was placed 3m away from the EUT. During testing, turn around the turn table and move the antenna from 1m to 4m to find the maximum field-strength reading. All peripherals were placed at a distance of 10cm between each other. Both horizontal and vertical antenna polarities were tested.</p>						

Associated with the radiated emission test data in this report is a  $\pm 3.08$ dB measurement uncertainty.

**4.2.3 Measurement Data**

An initial pre-scan was performed in the 3m chamber using the spectrum analyzers in peak detection mode. The EUT was measured by Biology antenna with 2 orthogonal polarities and peak emissions from the EUT were detected within 6dB of the class B limit line.

The following quasi-peak measurements were performed on the EUT.

Frequency (MHz)	Antenna Polar.	Factor (dB)	QP Reading (dB $\mu$ V/m)	QP Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
* 31.940	Vertical	13.320	18.200	31.520	40.000	-8.480
40.670	Vertical	13.980	13.500	27.480	40.000	-12.520
48.430	Vertical	13.990	10.300	24.290	40.000	-15.710
88.200	Vertical	10.950	12.500	23.450	40.000	-16.550
130.880	Vertical	15.080	2.600	17.680	40.000	-22.320
257.950	Vertical	15.480	3.500	18.980	47.000	-28.020
30.970	Horizontal	13.300	7.200	20.500	40.000	-19.500
45.520	Horizontal	14.050	4.600	18.650	40.000	-21.350
* 50.370	Horizontal	13.960	6.800	20.760	40.000	-19.240
81.410	Horizontal	10.520	5.900	16.420	40.000	-23.580
129.910	Horizontal	15.000	5.500	20.500	40.000	-19.500
242.430	Horizontal	15.030	3.300	18.330	47.000	-28.670

Note: '\*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss + Site Attenuation

**Shenzhen ZCT Technology Co., Ltd.**

3F, 5th Building, Hongsheng Industrial Zone, No.4336 Bao'an Road, Bao'an District, Shenzhen, China.

Tel: 400-805-1899; Fax:86-755-23702323; <http://www.renzhengjiance.com>

(Put test data for H)

<b>EUT:</b>	<b>Adapter Power</b>	<b>Model No.:</b>	<b>LCD PANEL &amp; LCD MODULE</b>
<b>Temperature:</b>	<b>24°C</b>	<b>Relative Humidity:</b>	<b>55%</b>
<b>Distance:</b>	<b>3m</b>	<b>Test Power:</b>	<b>5V/60Hz</b>
<b>Polarization:</b>	<b>Horizontal</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Test By:</b>	<b>Vito</b>
<b>Test Mode:</b>	<b>FULL LOAD</b>		
<b>Note:</b>	<b>5V/0.03A</b>		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.7986	28.51	-9.50	19.01	40.00	-20.99	QP
2	71.3300	32.44	-14.72	17.72	40.00	-22.28	QP
3	101.6443	43.19	-16.94	26.25	43.50	-17.25	QP
4	109.7960	41.92	-15.89	26.03	43.50	-17.47	QP
5	135.5062	33.82	-11.68	22.14	43.50	-21.36	QP
6	170.7926	30.73	-11.03	19.70	43.50	-23.80	QP



(Put test data for V)

EUT:	Adapter Power	Model No.:	LCD PANEL & LCD MODULE
Temperature:	24°C	Relative Humidity:	55%
Distance:	3m	Test Power:	5V/60Hz
Polarization:	Vertical	Test Result:	Pass
Standard:	(RE)FCC PART 15 class B 3m	Test By:	Vito
Test Mode:	FULL LOAD		
Note:	5V/0.03A		



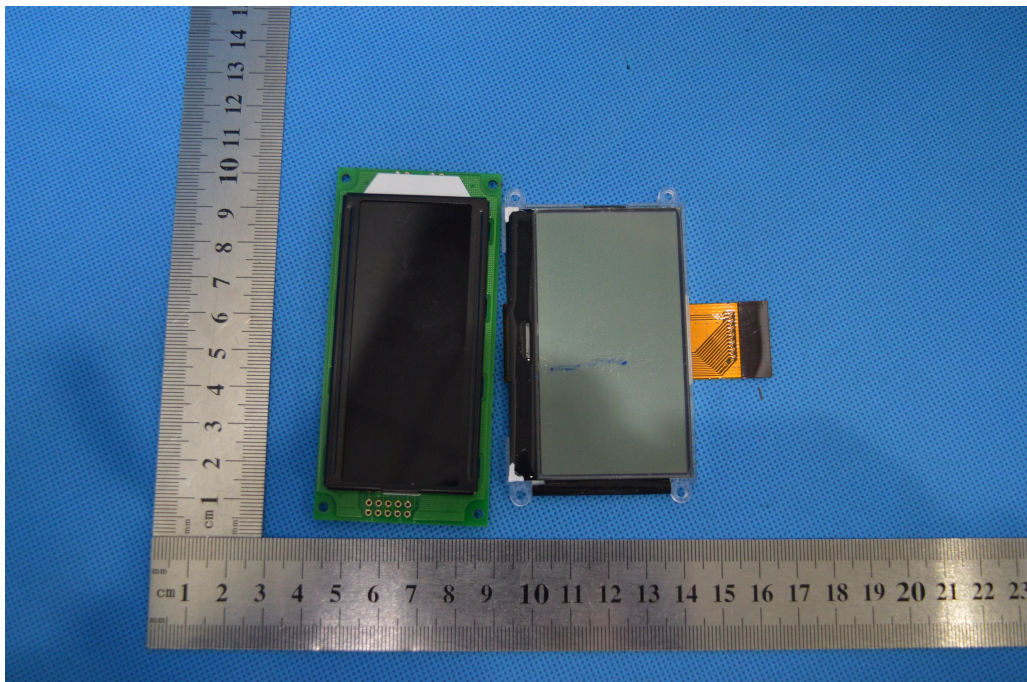
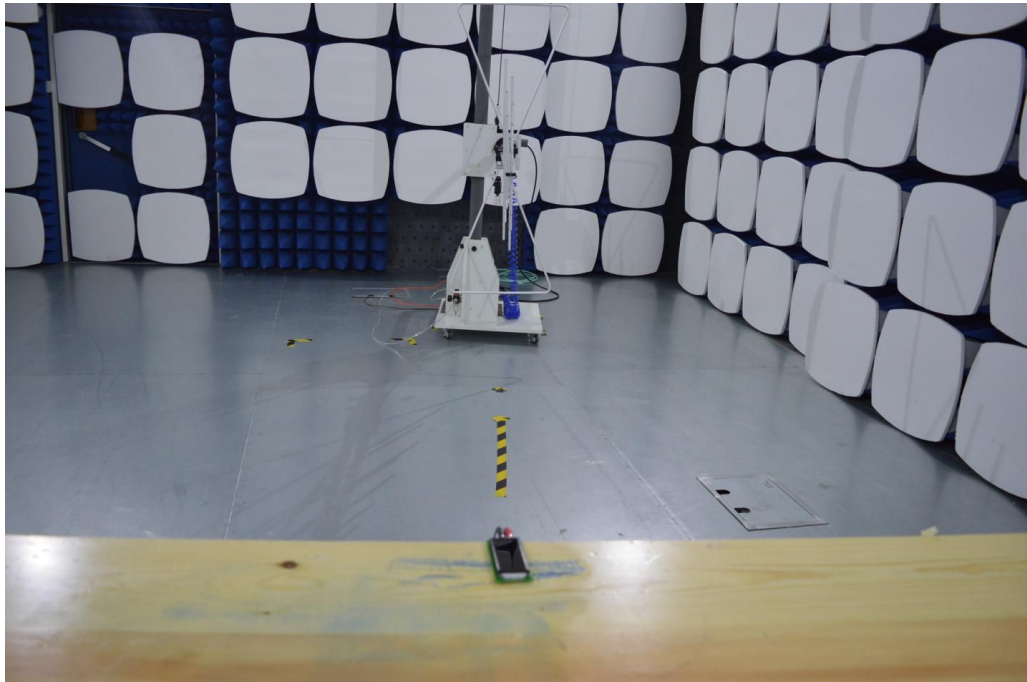
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	42.48	-8.32	34.16	40.00	-5.84	QP
2	33.9174	39.54	-11.11	28.43	40.00	-11.57	QP
3	75.4463	40.27	-13.52	26.75	40.00	-13.25	QP
4	98.8324	38.48	-12.57	25.91	43.50	-17.59	QP
5	108.2667	36.64	-12.44	24.20	43.50	-19.30	QP
6	174.4241	27.76	-8.19	19.57	43.50	-23.93	QP

**Shenzhen ZCT Technology Co., Ltd.**

3F, 5th Building, Hongsheng Industrial Zone, No.4336 Bao'an Road, Bao'an District, Shenzhen, China.

Tel: 400-805-1899; Fax:86-755-23702323; <http://www.renzhengjiance.com>

## 5 APPENDIX-Photographs of EUT Constructional Details



--End of report--